

ORIGINAL

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Telecommunications Services)
Inside Wiring)
)
Customer Premises Equipment)

CS Docket No. 95-184

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COMMENTS OF SIECOR CORPORATION

Siecor Corporation ("Siecor") hereby submits its comments in response to the above-captioned Notice of Proposed Rulemaking ("NPRM").¹ Siecor is a leading supplier of network interface devices ("NIDs") to local exchange carriers ("LECs") and, increasingly, other providers of voice, data, and video services. Siecor comments in this proceeding to provide the Commission with its technical expertise on the functions and capabilities of NIDs, and to explain how NIDs can continue to serve a growing role in promoting the Commission's pro-competitive inside wiring policy goals.

I. INTRODUCTION AND SUMMARY

In the years since the FCC deregulated telephone inside wiring, NIDs have helped subscribers and service providers make the transition from a regime of end-to-end provider control of wiring to a system of shared subscriber and provider responsibility for the wiring. The Commission now proposes to extend the pro-

¹ Telecommunications Services Inside Wiring, FCC 95-504, CS Docket No. 95-184 (rel. Jan. 26, 1996).

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competitive benefits of subscriber-controlled inside wiring to the cable television realm. Siecor believes that communications NIDs can and will play a significant role in ensuring a smooth transition to a system of shared subscriber/provider responsibility for broadband wiring to the home.

In telephone installations, NIDs provide significant benefits to subscribers and service providers alike. For subscribers, the NID makes possible the safe use of CPE and the simple connection, diagnosis, and repair of inside wiring. For providers, the NID protects the integrity of the network and reduces maintenance and repair costs by eliminating unnecessary service calls. Subscribers and providers benefit, in particular, from the clearly defined demarcation point the NID provides.

NIDs will provide similar cable subscriber and provider benefits, while also advancing the *NPRM*'s goals of promoting competition among providers and increasing subscriber control of inside wiring and CPE.² Moreover, from a marketplace perspective, NIDs offer critical solutions to certain technical issues posed by cable provision of telephony and are therefore likely to be used by cable operators in the future.

Consistent with marketplace trends, the Commission should adopt rules in this proceeding that appropriately recognize the important role that NIDs will play in the convergence of telephone and cable service, and should look to NIDs (perhaps even explicitly) as a key tool to promote the *NPRM*'s competition goals.

² *NPRM* at ¶ 4.

II. THE NETWORK INTERFACE DEVICE HAS PLAYED AN IMPORTANT ROLE IN THE TRANSITION TO SUBSCRIBER-CONTROLLED INSIDE TELEPHONE WIRING

NIDs benefit telephone subscribers and service providers alike by creating a clearly discernible, easily accessed and readily maintained "physical" demarcation point between the telephone network and subscriber inside wiring for single unit telephone installations.³ By creating such a "clean" demarcation in the spheres of responsibility for telephone wiring, NIDs have made manageable the transition from provider to subscriber control over inside wiring.

Components in a NID. A NID is a plastic or metal enclosure typically mounted on the outside of a subscriber's dwelling that houses an electrical protector and a network interface telephone jack.⁴ A NID consists of two separate housing areas: the area accessible to the service provider contains the protector; and the area accessible to the subscriber contains the plug/jack module. The jack assembly

³ Section 68.3(a) of the Commission's rules sets the demarcation point at a point within 12 inches of the "protector" (which in most new installations is housed in a NID). 47 C.F.R. § 68.3(a). In the absence of a protector/NID, the FCC has set a "virtual" demarcation point within 12 inches of where the telephone wire enters the customer's premises. *Id.*

⁴ In contrast, telephone installations in multiple dwelling units ("MDUs") typically employ a building entrance terminal ("BET") at the curb. A BET can be configured as a multi-line NID, but does not provide the same ease of subscriber access offered by a residential NID. Moreover, as noted in the NPRM, the wiring from a BET to the individual dwelling units may be owned by the owner of the MDU or the tenants. NPRM at ¶ 8. The Commission may wish to address how residents of MDUs can realize the benefits offered by residential NIDs.

accommodates a modular telephone plug that can be used by the subscriber to test the inside wiring. At the discretion of the service provider, a NID also is capable of housing more advanced electronics, such as a remote line disconnect device or a remote isolation device, and may be capable of being retrofitted for additional lines.⁵ These components reduce or eliminate the need for the service provider to make on-site service and repair calls.

Functions of a NID. NIDs are widely used in the telephone industry and provide significant benefits to subscribers and service providers alike:

- NIDs provide for the termination and grounding of the telephone network plant (usually twisted pair) that comes to the home.
- NIDs house a protector that provides "overvoltage" protection for subscribers and acts as a lightning arrestor. The protector helps prevent electrical shock to consumers while they are using the telephone or other CPE.
- NIDs offer a user-friendly method of determining if telephone service problems are related to the subscriber owned inside wiring or the LEC network plant. Subscribers can use the plug/jack module in the NID to quickly make sure that the network wiring is in working order.
- NIDs allow a subscriber simply to disconnect from the telephone company side loop to make modifications or additions to inside wiring without the possibility of coming into contact with ringing voltage when working on the wiring.⁶
- NIDs can thereby minimize unnecessary service provider "truck rolls" to subscribers' premises.

⁵ NIDs are available that accommodate both twisted pair and coaxial cable connections.

⁶ NIDs manufactured by Siecor contain a label stating that the device is a network interface and detailing instructions and warnings for installation and repair of home wiring, as well as for testing.

- NIDs reduce the risk of endangering network security by preventing subscriber access to the protector (at the same time that access to the subscriber portion of the interface is facilitated).

In sum, the safety, identification, and diagnostic functions performed by the NID have substantially eased the transition from the prior system of end-to-end provider control of telephone wiring to the current subscriber/provider sharing of responsibility for the wiring. The NID has in this fashion been instrumental in helping telephone subscribers to take advantage of FCC rules allowing them to provide, install, and maintain their own inside wiring.

III. AS IT HAS FOR THE TELEPHONE INDUSTRY, THE NETWORK INTERFACE DEVICE CAN PLAY A VALUABLE ROLE IN THE TRANSITION TO SUBSCRIBER-OWNED CABLE WIRING AND CPE

FCC inside wiring rules should reflect the marketplace reality that, increasingly, NIDs will be deployed in both telephone and cable home installations. Accordingly, it would be logical to locate any uniform wireline demarcation point at or near the NID. Beyond the demarcation point issue, moreover, NIDs can be used to overcome potential technical obstacles to the *NPRM* goal of cable subscriber provision of wiring and CPE.

Marketplace Factors. The wired marketplace is moving toward the pervasive use of NIDs in new service installations, and FCC rules should conform to this marketplace development. While LECs have used NIDs for years, cable operators also

will use NIDs for cable telephony installations.⁷ Currently, a major technical impediment to cable telephony is engineering the "return path" from the subscriber premises to the network. The return path is vulnerable to noise and interference from a variety of external sources, such as electrical appliances in the subscriber premises. Operators now concur that a network interface device could be used to house electronics that can minimize such signal "ingress."⁸

Further, cable operators will use NIDs for cable telephony because they protect subscribers against injury from overvoltage. While the cable industry historically has not used protectors in the delivery of video programming, cable operators providing telephony will have to use a protector to ensure consumer safety. Unlike television viewers, users of telephones hold the CPE at issue to their heads and therefore could be much more susceptible to injury from overvoltage in the absence of a protector.

Expanding Past Policy Benefits. The significant subscriber and provider advantages of using NIDs for the telephone demarcation point would likewise be realized through cable operator use of NIDs. These benefits are central to the policies the *NPRM* seeks to promote:

- Subscribers to cable video or telephony services could safely and easily identify, install, and maintain the coaxial wiring on their side of the NID.

⁷ Siecor participates in the Society of Cable Telecommunications Engineers, a group that is developing standards for passive and active communications NIDS.

⁸ See The Wall Street Journal, *US WEST-Continental Deal Questioned By the Other Bells*, February 29, 1996 at B6 ("the latest cable model for telephony requires a "network interface box" that needs to be installed outside a subscriber's home.")

- The subscriber and provider could determine whether a service problem is attributable to the inside wiring or the cable network.
- The cable operator could ensure network integrity.

Further Solving Technical Problems. Moreover, the NID could be used to house electronics that would address signal security and signal leakage concerns raised by subscriber provision of CPE and inside cable wiring. NIDs are capable of housing some of the access and security circuitry currently located in the cable set-top box. For example, some researchers have suggested including within the network provider's secure section of the NID a "physical logical box" that allows for local or remote software updates by the network provider. By moving these security functions to the network side of the demarcation point, it may be possible to facilitate the *NPRM* goal of permitting subscribers to provide their own CPE, while also allowing service providers to protect their legitimate signal security interests.

Similarly, NIDs could house electronics to remedy signal leakage problems. While the *NPRM* proposes to allow cable subscribers to provide and install their own inside wiring, the Commission suggests that such a rule may contribute to signal leakage problems, and solicits comment on how to protect against such leakage.⁹ Devices exist that can help monitor and minimize signal leakage from coaxial cable. These devices are being designed for use in a NID-type enclosure mounted on the outside wall of a subscriber's residence. Accordingly, the use of NIDs by cable

⁹ *NPRM* at ¶ 44. The *NPRM* also asks whether signal leakage rules should apply to all broadband video signal providers. *Id.* at ¶ 25.

operators (and LECs' use of NIDs that include a coaxial cable) could advance the FCC goal of increasing subscriber control over inside broadband wiring.

Gateway to Competition. As LECs and cable operators now seek to enter one another's business, a common wireline NID demarcation point could play an important role in the development of competition. The clean delineation between the home and the network offered by a NID facilitates competition by making it easier for a competing provider to co-locate with or even displace an incumbent. The NID is thus capable of evolving into an open "gateway" through which competing service providers access the home network.¹⁰ Accordingly, the Commission's inside wiring rules should recognize, and indeed incorporate, the benefits of extensive deployment of NIDs by all wireline service providers.

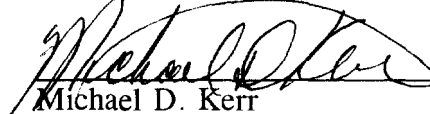
¹⁰ As competition increases in the provision of broadband facilities-based services, it may be appropriate for the FCC to clarify access, ownership, and network reliability issues raised by this gateway concept. For example, the Commission could base any such policies on the rules and principles adopted in the local exchange interconnection proceedings mandated by the 1996 Telecommunications Act.

IV. CONCLUSION

NIDs offers a simple and effective means of defining the rights and responsibilities of subscribers and service providers in a regulatory regime where subscribers provide their own inside wiring. Moreover, NIDs can be used to directly advance the goal of subscriber control of cable CPE and wiring. Accordingly, the Commission's inside wiring rules should expressly recognize and embrace the use of NIDs in the marketplace as a pro-consumer and pro-competitive means of managing the transition from provider to subscriber provision and control of narrowband and broadband inside wiring.

Respectfully submitted,

SIECOR CORPORATION

A handwritten signature in black ink, appearing to read "Michael D. Kerr", is written over the printed name.

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